

by different factors, but it can not be concluded that all high and low parts were connected with rainfall and drought. In this connection it is noteworthy that the tree-growth maximum during the fourteenth century coincides with an exceptional spottedness of the sun (Huntington and Visser, 1922, p. 109) and with the climatic stress, of which there are abundant historical records in the Old World, and which particularly expressed itself in unusually cold winters, cold rainy summers, and devastating storms.

Accordingly, before satisfactory interpretation of the sequoia curves and conclusions from them regarding the climate of the past can be made, it is necessary to have data on temperature, better knowledge of the relation between precipitation and growth of sequoia trees in dry situations, and general knowledge of the rôle for growth played by the radiation of the sun.

Besides being of climatological interest, the sequoia curve is of importance as eventually affording a possibility to extend the Swedish postglacial geochronology up to the present time. This chronology (not yet published), worked out by Ragnar Lidén (1911) in the valley of the River Ångermanälven (63° N.), is based upon annually laminated silty clays deposited in fiords of the Gulf of Bothnia ever since the disappearance of the last ice-sheet. The annual deposit consists of two thin layers, in texture and in color somewhat different, one of which may be essentially deposited in connection with the flood of the rivers during the melting of the snow in spring. By the upheaval of land, amounting to about 920 feet (280 meters), the clays have been gradually raised above sea-level and trenched by the rivers. Those from the last hundreds of years are not yet accessible, and Lidén has had to estimate the length of time that has elapsed since the formation of the youngest measured varve or annual layer.

This gap in the record might be bridged by help of the sequoia curve, for it seems likely that it will show a certain correspondence to the sedimentation curve in Norrland. The climatic stress during the fourteenth century, so distinctly recorded in the sequoia curve, is probably also recorded in the clay deposition. If this prove to be the case, and also other marked fluctuations in the tree curve are found in the clay curve, a connection may be made with high degree of probability, and the length of the postglacial time, which amounts to 8,500 to 9,000 years, exactly determined.

—A. J. H.

#### TORNADO IN SOUTHEASTERN ALABAMA

Mr. P. H. Smyth, meteorologist in charge of the Montgomery, Ala., Weather Bureau station, sends an account of a tornado which occurred in southeastern Alabama on October 25, 1925. This tornado was notable for being one of the most destructive storms of its kind that has occurred in southeastern Alabama, and also as being only the second tornado of record for October within the State.

It was clearly attendant upon the passage of a well-defined wind-shift line in the trough of low pressure connected with a depression the center of which passed north-eastward over the Ohio Valley during the night of the 24th-25th, the tornado apparently having been first observed about 2:00 a. m.

The path was 75 to 80 miles long, beginning about 50 miles north of the Alabama-Florida line and extending

ENE. to within about 10 miles of the Alabama-Georgia line. It was some 400 yards wide at its widest part.

The number of lives lost was reported to be 18; many persons were injured; property losses were estimated at a quarter of a million dollars.—B. M. V.

#### METEOROLOGICAL SUMMARY FOR SOUTHERN SOUTH AMERICA, OCTOBER, 1925

[Reported by Señor J. B. Navarrete, El Salto Observatory, Santiago, Chile. Translated by B. M. V.]

In the month of October the period of atmospheric disturbances, starting in September, began to decline; rainfall diminished over the whole of the southern part of the continent.

Between the first and the third an important atmospheric depression lay over the southern region, causing bad weather with violent winds and rains between Coquimbo and Magellanes; the most important amounts of precipitation were 18 mm. at Valparaiso, 16 mm. at Talca, 19 mm. at Traiguén, 13 mm. at Valdivia and 14 mm. at Punta Arenas.

On the 4th, in the afternoon, an important V-shaped depression caused electrical storms accompanied by violent squalls and hail in the interior of Aconcagua, Santiago, and O'Higgins Provinces.

Between the 5th and the 10th a large anticyclonic area persisted, characterized by general good weather, with winds prevailing southeast and rising temperature.

Between the 11th and the 13th a moderate depression caused variable weather and drizzling rain in the central zone.

From the 14th to the 22d a large anticyclonic area lay over the central part of the continent, causing steady atmospheric conditions. General fine weather was the rule during the period, with heavy south winds between Chiloe and Arauco and high temperatures over the whole central zone of Chile.

During the 23d and the 24th a depression of some intensity lay over the southern area, causing rains between Valdivia and Magellanes; at Valdivia 11 mm. fell.

Between the 26th and the 28th another cyclonic depression, more important than the previous one, affected the whole southern region of the continent; on this occasion rain and wind storms occurred from Valdivia southward. On the island of Huafo the wind velocity reached 25 m/s. (56 m/h.).

During the last days of the month atmospheric pressure rose over the southern part of the continent, reestablishing the anticyclonic régime, with general fine weather and rise of temperature.

#### BIBLIOGRAPHY

C. FITZHUGH TALMAN, Meteorologist in Charge of Library

##### RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

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